| 2017-2018 Catalog | | Theoretical Statistics | Applied Statistics | Data Science |
|---|---|---|---|---|
| LSP (8) | 5 | MATH 198 Calculus I | | |
| | 3 | STAT 190 or STAT 290 (3) | | |
| Math Core (7-8) | 4 or 5 | MATH 263 Calculus II (5) / STAT 260 Applied Mathematics for Data Analysis (4) / MATH 260 Applied Mathematics for Data Analysis (4) | | |
| | 3 | MATH 285 Matrix Algebra or MATH 357 Linear Algebra (3) | | |
| Stat Core (6) | 3 | STAT 250 Statistical Computing (3) prereq - STAT 190 | | |
| | 3 | STAT 478 Regression Analysis (3) prereq - MATH 192 or MATH 198, MATH 285 or 357, STAT 250 | | |
| CS Core (3) | 4 | CS 170 Introduction to Computer Science I or CS 180 | | |
| Seminars (5) and Capstone | 1 | STAT 101 Statistics Freshman Seminar (Careers, Opportunities, Ethics) | | |
| | 1 | STAT 398 Statistics Intermediate Seminar (Ethics/History/Job Stuff) | | |
| | 2 | STAT 497 WE/Capstone Experience (could be Research, Internship, or Project) - substitution for double-majors who do a STAT-related project | | |
| | 1 | STAT 498 Senior Seminar (post-Truman skills, Ethics, Big Picture) | | |
| Core Credits | 22-23 | | | |
| Core Choices | | MATH 263 Calc II (1 add'l hour) (not 260)<br>MATH 357 Linear Algebra (not MATH 285)<br>STAT 290 Statistics (not STAT 190) | | |
| Math | | MATH 264 Calc III (3)<br>MATH 200 WE/ Foundations (3)<br>MATH 461 Adv Calc (3) | STAT 270 Probability (may be renumbered)<br>(STAT 290 + CS 191 would substitute) | STAT 270 Probability (may be renumbered)<br>(STAT 290 + CS 191 would substitute) |
| Stat | | STAT 570 Math Stat I (3)<br>STAT 571 Math Stat II (3) | STAT 210 WE/ Data Collection & Field Methods (3)<br>STAT 392 Statistical Consulting w/ Practicum (3) | STAT 220 Fundamentals of Data Science (3)<br>STAT 320 WE/ Data Visualization (3)<br>STAT 420 Data Mining and Multivariate Stats (3) |
| Electives | | 300+ STAT elective (3)<br>400+ STAT elective (3) (475 recommended) | 300+ STAT electives (6)<br>400+ STAT electives (6) | 300+ STAT or specified CS electives (6)<br>Bayesian/Big data is strongly recommended |
| CS | | | | CS 430 Database (3) |
| Minor/internship | | Recommended minor (Math?) | recommended minor in an applied area | recommended internship |
| core credits | | 23 | 22-23 | 22-23 |
| concentration cr | | 21 | 21 | 21 |
| Total Size | | 44 credits (+8 credits in LSP) | 43-44 credits (+8 credits in LSP) | 43-44 (+ 8 credits in LSP) |
| | | Theoretical Statistics | Applied Statistics | Data Science |
| Program objectives | | Develop statistical reasoning and computational skills. Understand statistical theory with foundation in mathematics | Develop statistical reasoning and computational skills. Understand how data analysis solves real world problems in applied areas | Develop statistical reasoning and computational skills. Understand fundamental ideas of information and data science, motivated by interdisciplinary connections to real-world applications. |